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JOLIET IRON AND STEEL COMPANY, JOLIET WORKS
(U.S. Steel Corporation, Joliet Works)
I&M Canal National Heritage Corridor
Joliet
Will County
Illinois

HARR No. IL-57

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
P.O. Box 37127
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HISTORIC AMERICAN ENGINEERING RECORD
JOLIET IRON AND STEEL COMPANY, JOLIET WORKS
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I&M Canal National Heritage Corridor

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Location: West of Collins Street, north of State Street
Joliet, Will County, Illinois

UTM: 16 E.410200 N.4598800
Quad: Joliet

Date of Construction: 1869-1970s

Builder: Unknown

Present Owner: United States Steel Corporation

Present Status: Partly abandoned

Significance: With its earliest buildings dating to the 1870s, the extensive Joliet Iron Works is distinguished for being the ninth operating Bessemer steel plant (1873) and for its architecturally outstanding office (1873).

Project Information: The Illinois and Michigan Canal was designated a National Heritage Corridor in 1984. The following year HABS/HAER embarked on an extensive inventory and documentation project of the 100 mile-long corridor. Field work for this project was concluded in 1988. Final editing of the documentation was completed in 1992.

Historians: Joseph DeRose and Carolyn Brown, 1986; Gray Fitzsimons and Margaret Mulrooney, 1987.

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The Joliet Works of U.S. Steel encompasses nearly 170 acres and extends along a wide stretch of land bounded by Collins Street to the east, and the DesPlaines River to the west. There are about sixty buildings within the steel works plus a large battery of coke ovens. The buildings are constructed of various materials--from limestone, brick and wood to steel and reinforced concrete.

The Union Coal, Iron & Transportation Company developed an iron works on Collins Street in 1869. The company erected two coke-fired blast furnaces and two rod mills. By 1873 the business was reorganized as the Joliet Iron and Steel Company, and a Bessemer steel plant, designed by Alexander Holley, was erected. This plant was the nation's ninth operating Bessemer plant. In 1889 Joliet Iron and Steel merged with the Illinois Steel Company, the Midwest's largest steel maker with plants in Chicago and Cleveland. The works were reorganized again in 1898 when the plant was absorbed by the newly-formed Federal Steel Company. Finally in 1901, with the formation of U.S. Steel Corporation, the Joliet Works passed into the hands of the nation's largest steel maker.

During the early 1900s the Joliet Works boasted four modern blast furnaces. These have been torn down and nothing remains of the blast furnace operation. Also, nothing remains of the historic Bessemer. During the 1960s and 1970s, the last two decades of extensive operations at the Joliet Works, the steel works no longer ran as an integrated mill. Coke, pig iron, and steel were produced in other U.S. Steel facilities; steel for the production of rods, wire, and nails at Joliet was obtained from outside the plant. The Joliet Works remained active through the 1970s. In the early 1980s U.S. Steel dramatically reduced its Joliet operations and most of buildings are presently abandoned.

The earliest buildings date from the 1870s and include the Machine Shop (1872), the Blacksmith Shop (1873), the Pattern Shop (1873), and the Company Office (1873). All of these structures were erected by the Joliet Iron and Steel Company.

The Machine Shop is a two-and-one-half-story building with a gable roof and random-range limestone walls. Measuring 300' x 130', the Machine Shop features large circular windows at the gable ends. The building has numerous additions and alterations, including glass-block windows and adjoining brick and concrete-block buildings. Originally, the Machine Shop's function was the repair of a wide range of machinery and rolling mill equipment. The shop housed a Moore roll lathe, two W. H. Sellers planers, a Hewes & Phillips Company drilling and boring machine, a W. H. Sellers sixty-inch slotting machine, a

Bement fourteen-inch shaping machine, bolt cutter, four screw cutting lathes, two drill presses, and overhead crane. The various lathes, planers, shapers, and boring mills were belt-driven by a central shaft powered by a steam engine. None of this early equipment survives in the Machine Shop.

Built in 1873, the Blacksmith Shop is a one-and-one-half-story building with random-range limestone walls. The building measures approximately 70' x 60' and features brick circular arches spanning the window and door openings. The Blacksmith Shop originally contained a steam-powered hammer with a 1,000-pound capacity manufactured by W. H. Sellers of Philadelphia. It is attached to a large three-story steel-frame addition erected in the early 1900s. The building is currently abandoned.

The Pattern Shop (1872-1873) is a two-and-one-half-story building with a gable roof and random-range limestone walls. The building measures 85' x 45'. Originally, the building functioned as a small pattern and carpenter shop. A large carpenter shop was located just to the south of the Pattern Building. The carpenter shop has since been demolished. The pattern shop housed various types of machinery, including a Daniel's planer, an arc saw bench, a scroll saw, and two lathes. All machinery was powered by overhead belting. None of this machinery survives.

The Company Office (1873) is an impressive two-and-one-half-story limestone building measuring 90' x 60'. It features ornate quoins and dentils, a massive stone arch spanning the main entrance, and a gable roof containing a large pedimented gable end. The Company Office was one of the most architecturally outstanding buildings erected by the Joliet Iron and Steel Company soon after its acquisition of the Joliet Works.

During the decade the newly formed Illinois Steel Company operated the Joliet Works, additions made to the plant include the Electric Lighting and Power Plant (ca. 1890), the Roll Shop (ca. 1890), and the Stores building (ca. 1890).

Around 1890 Illinois Steel Company constructed a large central powerhouse for the purpose of electrifying the Joliet Works. The powerhouse was built with brick walls and a steel frame supporting riveted-steel roof trusses. Measuring 120' x 63', this building features a stone foundation and brick segmental arches with limestone sills. By the mid 1890s, a large addition was constructed to the east. The new addition was a two-and-one-half-story brick building with a steel frame and steel roof trusses supporting a gable roof and full-length

monitor. The building measures approximately 110' x 60'. By 1897 the expanded powerhouse contained three generators and six dynamos. Electric power was provided for ten motors throughout the works, 133 arc lights, and 957 incandescent lamps. None of this equipment survives, and, most recently, the building was used as a repair shop for electric motors.

The Roll Shop, also erected in the early 1890s, is a large three-story brick building measuring 260' x 70'. The Roll Shop was built on the site of the old "Sundry Mill," a building erected by the Joliet Iron and Steel Company in the 1870s. The "Sundry Mill" contained a steam-powered roll train, five heating furnaces and a steam-powered horseshoe-manufacturing machine. The "Sundry Mill" was closed in 1886 and demolished in the early 1890s. The new Roll Shop contained lathes for the manufacture and repair of rolls used in the company's rolling mills. The building has common-bond brick walls and pilasters encasing steel columns. Riveted steel roof trusses support the gable roof.

Adjacent to the Roll Shop is the Stores Building which was constructed on top of the old "B" Mill. (The Joliet Iron and Steel Company built the "B" Mill in the 1870s; probably, it was operated as a merchant mill or a producer of specialty rolled iron products.) One of the striking features of the Stores Building is the use of the original limestone arched walls for the first story contrasted with common-bond, red-brick walls for the second story. Measuring 140' x 110', the two-and-one-half-story building contains a steel frame; riveted-steel roof trusses support a gable roof.

In 1895 the Illinois Steel Company erected a new merchant mill. Measuring about 115' x 40', the Merchant Mill contains a stone foundation, brick walls, and steel frame. This building was greatly expanded over the next fifty years, and presently it adjoins a large steel-frame building to the north and east. In fact, the northern addition, a four-and-one-half-story structure measuring 390' x 145', dwarfs the old merchant mill.

When it commenced operations, the Merchant Mill housed a Belgian train with two stands of eighteen-inch roughing rolls and seven stands of twelve-inch finishing rolls. All rolls were driven by one horizontal Wheelock steam engine. Six steam boilers occupied a small lean-to on the south side of the mill. Two Crane steam-powered, double-reversing engines ran the roller table. Billets were brought on an elevated conveyor from the adjacent billet mill and made into merchant sizes of round, flat and square shapes. The mill also produced bolts and spikes before this operation was moved into a separate building. None of the machinery survives. The greatly expanded facility remains in

good condition and is currently serving as a billet grinding mill. Other significant buildings erected by U.S. Steel include: Rod Mill No.1, No. 2, and No. 3. The buildings all have large steel-frame buildings covered with corrugated metal built in the 1930s. The Fence and Barbed Wire Department, a large steel frame structure, was built in the 1950s. The Nail Department, built in the 1920s-1950, adjoins the Fence and Barbed Wire Department. The Wire Department Building is a steel-frame building clad with corrugated metal built in the 1930s. The Annealing and Galvanizing Department is located in two adjacent steel-frame buildings built in the 1930s-1950s. Finally, the huge warehouse building, a steel-frame structure, was built along State Street in the 1960s.

SOURCES:

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